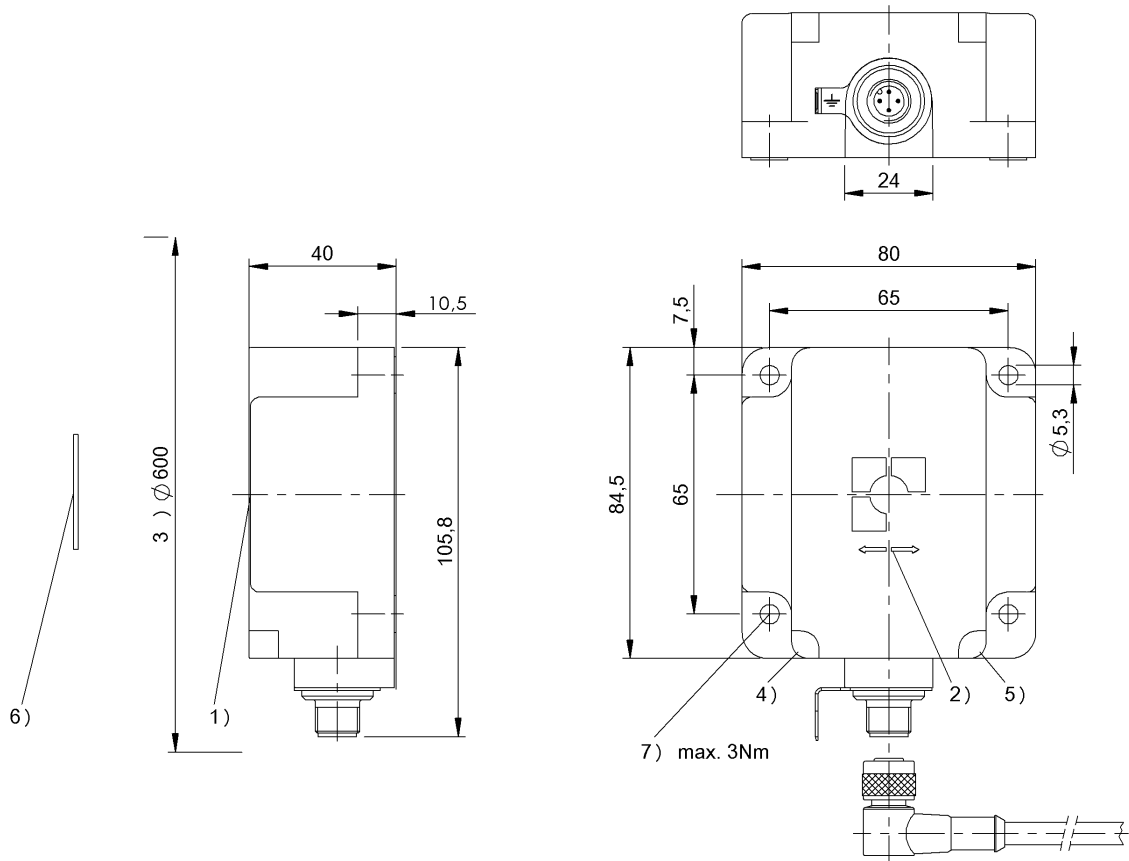


HF (13.56 MHz)  
 BIS M-451-045-001-07-S4  
 Order Code: BIS00LM

# BALLUFF



- 1) Sensing surface
- 2) Read/write axis
- 3) Clear zone
- 4) LED (Power)
- 5) LED (TP)
- 6) Data carrier on steel
- 7) Tightening torque



### Basic features

Antenna type	Rod
Approval/Conformity	CE FCC Part 15 IC RSS-210 cULus EAC WEEE
EN 55022	Size 1, Cl. A
Principle of operation	Processor unit

### Display/Operation

Function indicator	Power (ON) Green LED TP (Tag Present) LED yellow
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### Electrical connection

Connection	M12x1-Male, 4-pin, A-coded
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HF (13.56 MHz)  
BIS M-451-045-001-07-S4  
Order Code: BIS00LM

# BALLUFF

## Electrical data

Current consumption max. at 24 V DC	150 mA
EN 300330-1	Power Class 5
Operating voltage $U_b$	18...30 VDC Supports only LPS/ Class 2
Residual ripple max.	1.3 Vpp

## Environmental conditions

Ambient temperature	0...70 °C
Continuous shock load	yes
EN 60068-2-27, Shock	yes
EN 60068-2-32 Free fall	yes
EN 60068-2-6, Vibration	yes
IP rating	IP67
Storage temperature	-20...85 °C

## Functional Characteristics

Supported data carrier types	DIN ISO 14443 DIN ISO 15693
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## Material

Housing material	PBT
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## Mechanical data

Application weight	380.00 g
Dimension	80 x 40 x 84.5 mm
Installation	metal-free (clear zone)

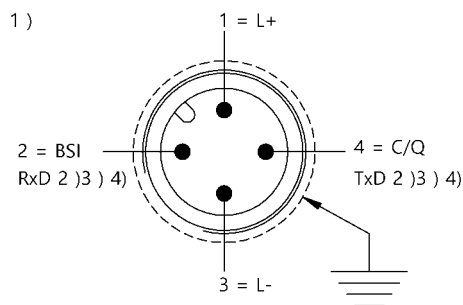
## Output/Interface

IO-Link version	1.1
Interface	IO-Link 1.1
Process data IN	10 bytes

## Remarks

For basic equipment see IO-Link catalog.  
When installing, the technical standards and regulations of the corresponding countries must be observed.  
Values are under rated conditions unless otherwise specified.  
Order accessories separately.  
For installation in metal: Observe clear zone.

## Connector Drawings



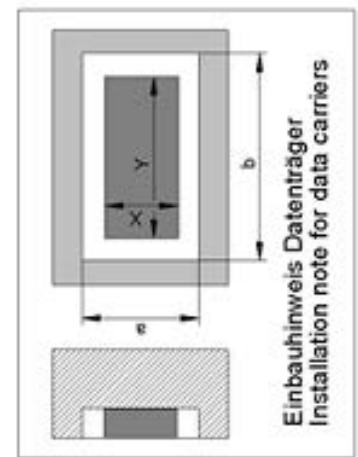
- 1) View towards connector
- 2) BSI service interface
- 3) Do not connect power
- 4) (Only for Balluff Service)

## Help Views

**BIS M-451-**

	BIS M-150-02/A	BIS M-151-02/A	BIS M-150-02/A	BIS M-151-02/A	
passende Datenträger Appropriate data carriers					
Freizone Datenträger in mm ( a ) Data carrier clear zone in mm	>200 >200	>200 >200	>200 >200	>200 >200	
Freizone Datenträger in mm ( b ) Data carrier clear zone in mm	>200 >200	>200 >200	>200 >200	>200 >200	
Datenträger Metall-Montagefläche 40x22 Data carrier metal mounting surface 40x22	0-52 0-52	0-52 0-52			
Datenträger Metall-Montagefläche ≥ 200x200 Data carrier metal mounting surface ≥ 200x200			0-65 0-65	0-65 0-65	
Schreibabstand in mm Write distance in mm	0-52 0-52	0-52 0-52	0-65 0-65	0-65 0-65	
Leseabstand in mm Read distance in mm	0-52 0-52	0-52 0-52	0-65 0-65	0-65 0-65	
Versatz in mm bei Abstand von	X Y	Y X	X Y	Y X	
	0 ±60 ±25	±60 ±25	±65 ±26	±65 ±26	
	5 ±60 ±25	±60 ±25	±65 ±26	±65 ±26	
	12 ±60 ±25	±60 ±25	±65 ±25	±65 ±25	
	15 ±60 ±25	±60 ±25	±65 ±25	±65 ±25	
	18 ±60 ±25	±60 ±25	±65 ±25	±65 ±25	
	20 ±60 ±25	±60 ±25	±65 ±25	±65 ±25	
	22 ±60 ±25	±60 ±25	±65 ±25	±65 ±25	
	25 ±60 ±25	±60 ±25	±65 ±25	±65 ±25	
	30 ±60 ±25	±60 ±25	±65 ±25	±65 ±25	
	32 ±50 ±25	±50 ±25	±65 ±25	±65 ±25	
	35 ±50 ±25	±50 ±25	±65 ±25	±65 ±25	
	40 ±50 ±20	±50 ±20	±50 ±25	±50 ±25	
	45 ±25 ±20	±25 ±20	±50 ±25	±50 ±25	
	50 ±25 ±20	±25 ±20	±50 ±25	±50 ±25	
	52 ±25 ±8	±25 ±8	±25 ±25	±25 ±25	
			±25 ±10	±25 ±10	
			±25 ±10	±25 ±10	

Offset in mm  
at distance



Einbauhinweis Datenträger  
Installation note for data carriers

**BIS M-451-\_\_**

	BIS M-152-03/A	BIS M-152-03/A	BIS M-153-02/A	BIS M-153-02/A
passende Datenträger Appropriate data carriers				
Freizone Datenträger in mm ( a ) Data carrier clear zone in mm	>200 >200	>10 >10	>240 >240	>240 >240
Freizone Datenträger in mm ( b ) Data carrier clear zone in mm	>200 >200	>50 >50	>480 >480	>480 >480
Freizone Datenträger in mm ( c ) Data carrier clear zone in mm	>50 >50	>2 >2	>50 >50	>50 >50
Schreibabstand in mm Write distance in mm	0-30 0-30	15-30 15-30	0-100 0-100	0-100 0-100
Leseabstand in mm Read distance in mm	0-30 0-30	15-30 15-30	0-100 0-100	0-100 0-100
Versatz in mm bei Abstand von	X Y	X Y	X Y	X Y
	0 ±35 ±20		±60 ±20	±60 ±20
	5 ±35 ±20		±60 ±20	±60 ±20
	10 ±35 ±20		±60 ±20	±60 ±20
	15 ±35 ±20	±35 ±15	±60 ±20	±60 ±20
	20 ±35 ±20	±35 ±15	±60 ±20	±60 ±20
	25 ±20 ±12	±28 ±15	±60 ±20	±60 ±20
	30 ±20 ±12	±28 ±15	±60 ±20	±60 ±20
	35		±60 ±20	±60 ±20
	40		±60 ±20	±60 ±20
	45		±60 ±20	±60 ±20
	50		±60 ±20	±60 ±20
	60		±60 ±20	±60 ±20
	70		±60 ±20	±60 ±20
	80		±60 ±20	±60 ±20
	90		±40 ±20	±40 ±20
	100		±40 ±20	±40 ±20

